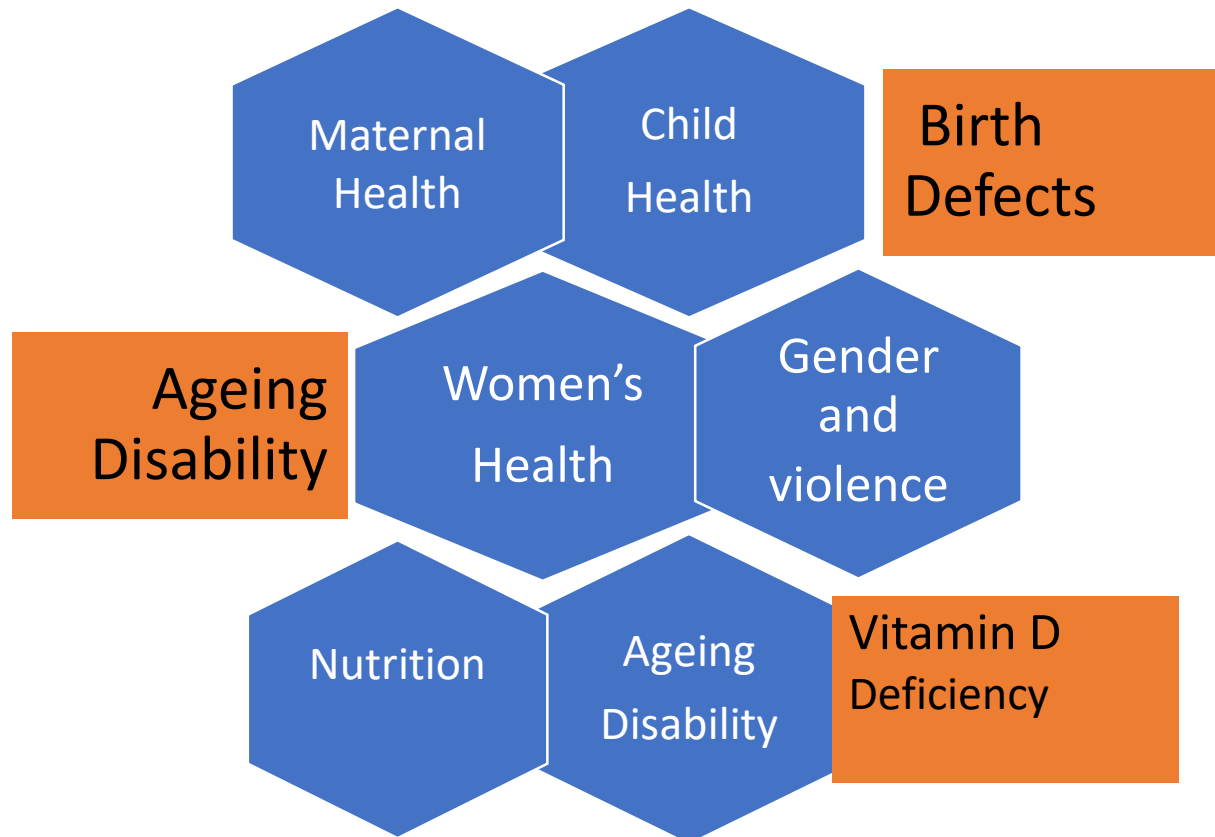




Translation Research in the Health of Women and Children

supported by
University Grants Commission –University with the
potential of excellence (UGC-UPE)
Savitribai Phule Pune University

GOAL: Interdisciplinary studies that have implications for public health and social policies related to women and children



Birth Defects

Dr. Anita kar



- **Study 1** : A systematic review and meta-analysis estimated a pooled prevalence of congenital anomaly affected births at 184.48 per 10,000 births (95% CI 164.74–204.21), suggesting that there may be as many as 472,177 (421,652 to 522,676) congenital anomaly affected births in India each year.
- **Study 2** : A cohort of 2107 pregnant women and identified that the total **prevalence of major congenital anomalies was 230.51** (170.99–310.11) per 10 000 births. Congenital heart defects were the most commonly reported anomaly.
- **Study 3**: Meta-analysis identified an overall birth prevalence of neural tube defects at 4.1 per 1000 (95% confidence interval [CI], 3.1–5.4) [3]. Hence, serum folate concentrations in women in early pregnancy was measured, identifying folate deficiency in 24% and possible deficiency in 21% women [4].
- **Study 4** : A community based data identified the high **prevalence of periconception risk factors for birth defects** and other maternal and fetal adverse pregnancy outcomes in women.

Enhancing positive pregnancy experiences

Dr. Abhay Kudale

- **Study 5: Cultural practices during pregnancy and post delivery:** Formative qualitative research in urban slum to operationalise recommendations of WHO 2016 ANC model
- The concept of preconception care does not exist in the community. Cultural practices surrounding pregnancy might hinder or support the care.
- Incorporating local traditions and cultural practices is necessary when operationalising recommendations of WHO 2016 ANC model



- **Study 6: Cultural Epidemiology of Congenital Heart Diseases**
Congenital heart defects were the most commonly reported anomaly, using Explanatory Model Interview Catalogue, 121 interviews to identify community explanation and awareness.

Vitamin D status of women in reproductive age

Dr. Angeline Jeyakumar



- **Study 7** : Two Systematic reviews estimated pooled prevalence of vitamin D deficiency in pregnant women and adolescent girls ; **32.35** (95%CI, (12.58- 117.48) in pregnant women and among adolescent girls was **25.70** (95% CI 3.89-2137.9).
- **Study 8** : Estimation of serum vitamin D levels in 233 pregnant women from PUBOS cohort , 95 % were deficient
- Prevalence of more than 20% is considered as serious public health concern
- Despite abundance of sunshine, high deficiency indicating chances of complications in pregnancy and adverse pregnancy outcome

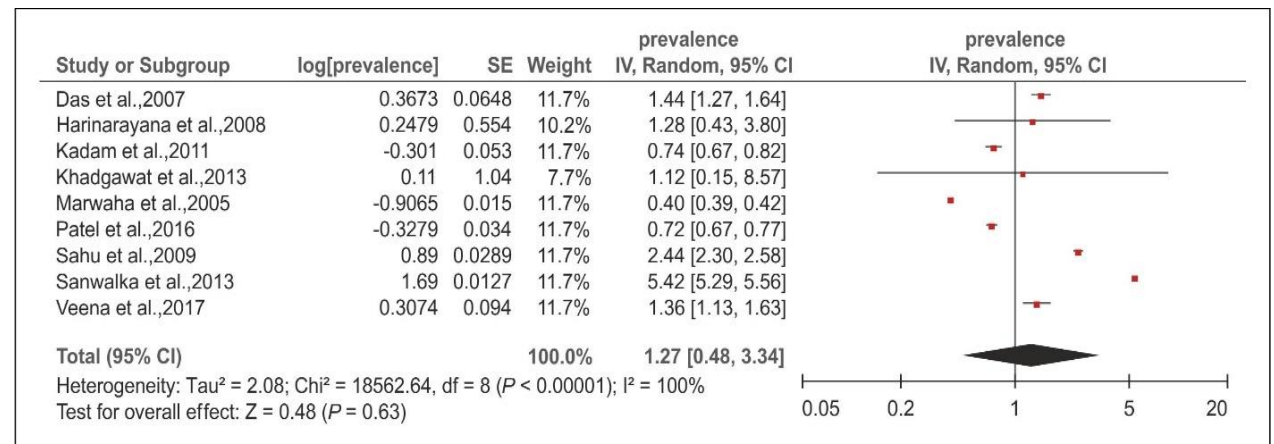


Fig 2: Forest plot to determine the pooled prevalence of vitamin D deficiency among adolescent girls in selected

Functional decline in midlife women

Dr. Aarti Nagarkar

- **Study 9:** Risk Factors for functional decline in 1168 women 40-59 years
- Functional decline : 60%
- Long term severe functional decline: 32 %
- Risk Factors : Moderate functional decline was associated with presence of chronic illness(OR 1.6, 95%CI 1.1-2.2), increasing body mass index (OR 1.4 95% CI 1.0-1.9), presence of stress (OR 1.5 95% CI 1.1-2.1) and hospitalization in last one year (OR 1.6 95% CI1.1.-2.4). In addition , > 85cms waist circumference, menopause (OR 2.1 95% CI 1.2-3.6),
- Protective factors : Regular physical activity, no depression, social participation
- Targeted interventions to prevent midlife factors affecting future functioning and disability and those that can help recover from the current disability



Study 10: 550 men in 40-59 years
Functional decline :
Functional decline : 45 %
severe difficulty : 19%
Chronic illness: 16.65
> Normal BMI: 28.9%
Functional decline associated only
with metabolic equivalent measured
using IPAQ

Gender and violence study

Dr. Suresh Jungari



Study 11 : Gender and violence study – based on the SDG goal 5

Violence during pregnancy leads to negative outcome for both mother and baby

Phase I – analysis of NFHS-4 data of 4,99,627 women. The estimated prevalence of violence during pregnancy was 2.9 in Maharashtra and 3.3 for India.

Phase II – to explore how and under what circumstances do pregnant women face violence

15.3 % prevalence of violence during pregnancy

High odds of violence when women belong to lower caste category, women with more number of children, alcoholic husband, women who justify violence and those who have experienced violence in life.

Policy suggestion: incorporating counseling component in ANC

Summary of Output

Publications	During the project period	Directly related to the project
Total	27	15
International	18	7
National	7	4
Conference presentation	2	4
Collaborations	1. Indo-Norway collaborative research on “Disability and Global Health” NTNU, Norway 2. International Clearinghouse for Birth Defects Surveillance and Research, USA 3. Public Health Genomics Foundation, Cambridge University, Cambridge UK.	
Ph.D/ M.Phil/ Project Assistants trained	4 Ph.D / 4 JRFs/ 8 PA / 4 internship / 8 dissertation / 8 Data collectors	